# DOCUMENT RESUME

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TITLE

Pupil Opinion Poll. [Physics, Chemistry, and

Biology]

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Great Britain

#### ABSTRACT

These three questionnaires were developed to assess the attitudes of British secondary students toward scientific subjects as taught in their schools. Each questionnaire contains 33 Likert scale items with five choices ranging from "strongly agree" to "strongly disagree." The subjects of the inventories are: (1) physics, (2) chemistry, and (3) biology. Bach test is divided into two parts, the first dealing with the role of the science in the student's life and the second concerning learning activities. Items in the three tests are identical except for reference to a particular science. (SD)

# PUPIL OPENION FOLL

# PHYSICS

U S DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

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The purpose of this questionnaire is to find out what you think about physics as it is terent in your school. The questionnaire contains a number of statements appart thysics.

This is hot a test and there are no right or wrong answers. We would like you to give your off opinion of each of the statements in the booking. It is

# <u>Directions</u>

Please Tallian grant and the name of your school on the adswer sheet. That redd the a male from tallow.

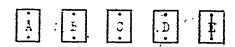
#### Sirgie item

I would rether road a book than watch television.

A B C D E

Strengly Agree Not sure Disagree Strongly

are disagree



Each statement is followed by five lettered alternatives, A to E-which are used to infloate now for you agree or disagree with the statement. Thus, if you strongly disagreed with the statement you would mark alternative E as illustrated above.

Each statement in the booklet looks like the sample item. When you read each one car fully, also read each of the alternatives given below it. Then decide which ONE answer best fits your feelings and mark the box for that answer on your answer sheet. Please choose only one alternative for each statement and try to respond to every statement. If you mark a wrong letter by mistake, erase the mark carefully before putting in the correct one. Flease to not mark the question booklet.

Do not think too long on any one statement. Give the first 'natural' answer as it comes to you. Try to answer every one of the items in the booklet.

# PHYSICS IN MY LIFE.

	• •	/			• (.
i.	I enjoy physics	lessons more	than other le	saons.	
	• A /	.B	· C	ъ.	E
	. such '/	slightly	about the	- less	much
	, /-	more . ,			less
	• • •	<u></u>	•	ı	_
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2.			ce renora cora	are more run am	m z neez
~ ~	of work in othe	er subjects.	ı C	n-	' E ' -
	A	< B			gree strongly
.:-		agree	not sure	. drsai	
`	agree				disagree
•	·		_ `		
3.	There are too m	env facts to	learn in physi	cs.	• •
	1 100 C	D .		מ	· · · · · · · · · · · · · · · · · · ·
•					
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_	🦿 agree 🔧 🕒		,	•	disagree ·
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	. A. ,	D 1,3		-	•
, · · ·	strongly	agree	not süre	disa	gree strongly,
	agree ~	• •	- <u>:</u>	•	disagree
			•	•	
5.3	I like to talk	with sensie a	host new dasco	weries in physic	28.
J• ,	· · · · · · · · · · · · · · · · · · ·	"Tur reobte a	· · · · ·	יום ליים יודר מסדומיי	7
` `	. A	B		1K	
	very much	much	some-	a li	ttle not.at all
	. · · · .	`	` •		•
. 5. · ·	I do well in ph	nvsics.	`	• \	•
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•	· •		•	*	poorly
L.					
		* *	,	• ~	
₹"	. I would like to	be given a p	hysics book or	· a piece of phy	sics equipment.
£."	A	. B	· C	· D	E
₹.1 <sup>1</sup>	A	. B	· C	· D	E
To a	very much	B T woold	· C it would be	D ••• I don't thin	E k_ not in (
£	very much	B T woold	· C it would be	D ••• I don't thin	E
	very much	B I would be pleased	it would be all right	D ••• I don't thin	E k_ not in (
	very much	B I would be pleased	it would be all right	D ••• I don't thin	E k_ not in (
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	A very much  Yery much  Yy mother wants	B I would be pleased me to be a r B	it would be all right	••I don't thin I would like	E k_ not in (
	very much	B I would be pleased me to be a r B	it would be all right hysicist.	••I don't thin I would like	E not in it the least
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9.	Very much  Very much  Very much  I would rather research team.  A strongly agree.  I would special A definitely yes  I look forward	B I would be pleased me to be a r B much he a member of B agree lise in physic B very likely to physics le B	it would be all right hysicist.  some  of a pop graun  C not sure  s if I had the maybe	I don't thin I would like  D not  than a member  D disa	it the least  it the least  sure not at all  of a physics  Exree strongly  disagree  Elikely never
9.	Very much  My mother wants  A  very much  I would rather research team.  A  strongly agree  I would special  A  definitely yes	B I would be pleased me to be a r B much be a member of B agree lise in physic B very likely to physics le B most of	it would be all right hysicist.  Some  of a 'pop grauge C not sure.  s if I had the maybe	I don't thin I would like  D not  than a member  D disa  chance.  D	it the least  it the least  sure not at all  of a physics  Exree strongly  disagree  Elikely never
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9.	Very much  Yery much  Very much  I would rather research team.  A strongly agree  I would special A definitely yes  I look forward  A always	B I would be pleased me to be a p B much be a member of B agree lise in physic B very likely to physics le B most of the time	it would be all right hysicist.  Some  of a 'pop graug  C not sure  as if I had the C maybe  esson.  C sometimes	I don't thin I would like  I would like  I than a member  O disa  chance.  D not  physics lesson	it the least  it the least  sure not at all  of a physics  E  gree strongly  disagree  E  likely never
9.	Very much  Yery much  Very much  I would rather research team.  A strongly agree  I would special A definitely yes  I look forward  A always	B I would be pleased me to be a p B much be a member of B agree lise in physic B very likely to physics le B most of the time	it would be all right hysicist.  Some  of a 'pop graug  C not sure  as if I had the C maybe  esson.  C sometimes	I don't thin I would like  D not  than a member  D disa  chance.  D  seld	it the least  it the least  sure not at all  of a physics  E  gree strongly  disagree  E  likely never
9.	Very much  Yery much  I would rather research team.  A strongly agree.  I would special A definitely yes  I look forward always  I would enjoy so A	B I would be pleased me to be a r B much he a member of B agree lise in physics B very likely to physics le B most of the time school more if B	it would be all right hysicist.  Some  of a 'pop grauge C'  not sure  es if I had the company be co	I don't thin I would like  I would like  I than a member  O disa  chance.  D not  physics lesson	it the least  the least  sure not at all  of a physics  Expree strongly  disagree  Elikely never
9.	Very much  Yery much  Very much  I would rather research team.  A strongly agree  I would special A definitely yes  I look forward  A always	B I would be pleased me to be a p B much he a member of B agree lise in physics B very likely to physics le B most of the time	it would be all right hysicist.  Some  of a 'pop graug  C not sure  as if I had the C maybe  esson.  C sometimes	I don't thin I would like  D not  than a member  D disa  chance.  D reld  physics lesson	it the least  the least  sure not at all  of a physics  Exree strongly  disagree  E  likely never

4

25.	It is the exper	riments in p	hysics that make me u	nderstand it.	
,	3 X A	В.	C	D	E
ì	. strongly	egree	not sure	disagree	strongly
٠.	sgree	•	· · .		disagree
26.	Working in the	nhiming lah	onatom is fin		
201	"Uranig in me	B restrant	arenosy. IS ismi.	'n ̂	· F
	· strongly	egree '	not sure	disagree .	strongly
	agree.	<b>.</b>			disagree
•				•	, 0 .
27.	Trying to solve	e a physics	problem is interestin	• · · _	
	A . strongly	5	U .	. D	E
	ezice,	agree	. , not sure	disagree	strongly
			.   `		.disagree
28.	I would rether	work out hos	v to do a physics exp	eriment by mysel	lf
_	. than be told.		•	. (.	•
•	· A · _ ·	В (	C	D ;	E
	strongly	.egree	not sure	disagree	strongly
	. agree		•	` <b>&gt;</b> -	disagree
29.	· I enjoy discuss	ing physics	problems raised in c	lace with my fai	ionde '
- / •		B ,	C bronscam(regreen Til C	iess aren my ir: D	renus. F
· •	.strongly	agree	not sure	disagree	strongly
	agree .	•			disagree
			•	•	•
30.	You can learn m	ore from a p	physics text book that	n by doing exper	riments.
•	A * c+non also :	B . /	C .	D . ,	E
•	strongly;	ggree	not sure	, disagree	strongly
•				-	disagree
31.	Fhysics teacher	s always ask	questions to which	they know the ar	/# *
	A.	. B	Ç	D D	. E
•	strongly	agree _	not sure	disagree	strongly
	agree	•	•		disagree
*704	Mana wheiria	· · · · · · · · · · · · · · · · · · ·		_	
• 22:	rore physics ed	uipment is.ņ	eeded in schools.		
	strongly	egree •	not sure	D '	E
	agree	aga cc		disa <i>g</i> ree .	strongly disagree
	. <u>v</u> = 22	٠	• ·	-	aroagree.
33· .	Fhysics experime the ones you do	ents demonst	rated by teachers are	e more interesti	ng than .
•	and ones you do	B .	Č.	D	, T.
	strongly	agree .	not sure	disagree	strongly
	agree			uzeuga ee	disegree
	• •	. 1			G

# FUPIL OPINION POLL

# CHEMISTRY

The purpose of this questionnaire is to find out what you think about themistry as it is taught in your school. The questionnaire contains a number of statements about chemistry.

We want to know what you feel and think about these ideas and whether you agree with them or not.

This is not a test and there are no right or wrong answers. We would like you to give your own opinion of each of the statements in the booklet.

#### Directions '

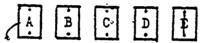
Please fill in your name and the name of your school on the answer sheet. Then read the sample item below.

# Sample item

I would rather read a book than watch television.

B C D E

Strongly Agree Not Disagree Strongly
Agree Sure Disagree



Each statement is followed by five lettered alternatives, A to Eff which are used to indicate how far you agree or disagree with the statement. Thus, if you strongly disagreed with the statement you would mark alternative E as illustrated above.

Each statement in the booklet looks like the sample Item. When you read each one carefully, also read each of the alternatives given below it. Then decide which ONE answer best fits your feelings and mark the box for that answer on your answer sheet. Please choose only one alternative for each statement and try to respond to every statement. If you mark a wrong letter by mistake, erase the mark carefully before putting in the correct one. Please do not mark the question booklet.

Do not think too long on any one statement. Give the first 'natural' answer as it comes to you. Try to answer every one of the items in the booklet.

# CHEMISTRY IN MY LIFE

	•	•	Λ.		• .
1.	· I enjoy ohemis	try lessons m	ore than other lo	esons.	•
`	A	B	C	. Д	E
	muoh	slightly	about   the	1ess	much
-	<del>-</del>	more			less
•	•	<b>-</b> .			
2.			istry laboratory	are more fun than	a week
	of work in oth		-	•	
	¿ A	₿ ·	C	Ð	E
	strongly	agree	not sure	disagree	strongly
	saree_		•	· ·	disagree
•		•/	•	•	• •
· 3.	There are too	many facts to	·learn in chemis	trv.	,,
7.	- A	B	C	- J D	1 E -
	strongly ·	sgree .	not sure	disagree	strongly
	samee .	46200	1100 9070	arbagree .	disagree
	h ggrag	_	•	•• `	gragies
A	Chemistry less	one one o fac	to of time	-	he.
<b>4•</b> .	cuemiacià resa		te or time.		70
•	А.	В,		. D	E
	strongly	egree (	not sure .	disagree	strongly
	, agree	• .	•	* .	disagree
	•	· 4	•	/•	
5•	"I like to talk	with people	about new discover	eries in chemistry	•
	A	В	C	D	D.
	very much	much	· some	a little	not at all
		. 4			
໌ "6.	I do well in c	hemistry.		•	•
•	A GO HOLL AND O	B	` c	ת	π
	nown woll	well .	•	poorly	270222
	. very well	MGIT .	average	poorty	very
	•	•	•	·.,	pdorly
₽.	T				_ 4
7.		o de given a	cuemistra pook o	r a piece of chemi	aury
	equipment.				· · ·
	/ A	.B	C	D	E
	very much	I would	it would be	I don't think	not in
•	,	pe blessed	äll right	I would like it	the least
-	-	•		a service and a	**************************************
8.	My mother want	ș me țode a		· i	
	Α `	, <b>B</b>	· C	D ,	E
•	very much	muoh	Bome	not sure	not' at
. •	•*	•	•		· all
-			٠,		
9.	I'would rather	be a member	of a loop group!	than a member of	<b>&amp;</b>
-	chemistry rese	arch team.			•
	A	В	C	D · ·	E.
	strongly	agree	not sure	disagree	strongly
	agree .				disagree
	9 <b>57</b> 66 1		•	,	"TD 8 2 4 6 6
10.	T month annote	lika in chard	gtme if T had in	: • Ohenoe	•
. 10.	T wonto abecia	TIRE IN ONEW!	stry if I had the	onance.	·E
•	A.	, B		u	<del></del>
•	definitely	yery 😅 .	· maybe	not likely	never
	<b>Aés</b>	likely	•		
	J	•	• `	• '	• /
11.	I look forward	to chemistry	lessons.		
	. A * '	• B	C	<b>D</b> , •	· E
•	always	most of	sometimes	seldom	never
		the time		<del></del>	
•	•	ONG ,VING	•		•
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	*	more	: muoh	·	deal less
* 25	•		704 ·	-	

, I should like to belong (or I like belonging) to a chemistry club. very much a little not sure some. Chemistry is just a load of technical terms which are hard to 14. remember. В · strongly . ' 'not sure disagree agree strongly agree disagree I would like to work with people who make discoveries in chemistry. most of' all the . occasionally seldom time ' the time 16. I do chemistry experiments in my spare time about: В once every once a once a once a week -month three months year I think the school should have more chemistry periods each week. 17. strongly not sure . , agree disagree strongly agree disagree 18. I find chemistry difficult to understand. difficult in between extremely easy difficult easy 19. My father wants me to become a chemist. D much very much 8 ome not sure not at 20. I should like to become a chemist. ٠C D a little very much much Some . LEARNING ACTIVITIES 21. I would much rather do experiments in chemistry than read about them. - always most of sometimes never Beldom the time 22. I would rather do a chemistry experiment than listen to a lecture on the same topio. strongly agree not sure disagree` strongly .agree odisagree I want to learn for myself why chemistry experiments turn out the 23. way they do. C ·B very much much a little not sure not at 24. It is fun to guess the outcome of chemistry experiments.

agree

not sure

-disagree

strongly

3.

	•		- <u> </u>	•	
25.	It is the experi	ments in cher	nistry that mai	ke me understan	d it.
	A	В	C	<b>D</b> (	· · · E
•	strongly	agree	not sure	disagree	strongly
•	agree /	,		,	disagree
•	. •			_	arnakt és
26.	Working in the o	hemistry labo	ratory is fun		-
	A	В		ת	E
•	strongly	agree	not gune	disagree	_
<b>?</b> ,	Sagree .	<b>46.00</b>	not but 4	grague.	strongly
,	Baby og	•	• .	, ,	disagree
27.	Truing to golve	a obomioim m	maki am dan dasa		
,-1× ·	Trying to solve	r onemiaria 1	moorem is jut	eresting	• _
	A manager	D	. U .	D	E
Δ	strongly	* agree	not sure	disagree	strongly
•	agree	•			disagree
00	_ :		•	· · · · · ·	18.
28.	I would rather w	ork out how t	o do a chemis:	try experiment 1	by myself
	than be told.	•			
	. A	В	. C .	D.	E
	strongly	agree	not sure	disagree	strongly
•	agree	· · · · · · · · · · · · · · · · · · ·	• • •		disagree
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ERIC

# PUPIL OPINIÓN POLL

# BIOLOGY

The purpose of this questionnaire is to find out what you think about biology as it is taught in your school. The questionnaire contains a number of statements about biology.

We want to know what you feel and think about these ideas and whether you agree with them or not.

This is not a test and there are no right or wrong answers. We would like you to give your own opinion of each of the statements in the booklet.

# Directions

Please fill in your name and the name of your school on the answer sheet. Then read the sample item below.

#### Sample item

I would rather read a book than watch television.

· A	∫ B	<b>∽</b> €	D	Ė,
Strongly	Agree	Not sure	Disagree	Strongly Disagree
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Each statement is followed by five lettered alternatives, A to E which are used to indicate how far you agree or disagree with the statement. Thus, if you strongly disagreed with the statement you would mark alternative E as illustrated above.

Each statement in the booklet looks like the sample item. When you read each one carefully, also read each of the alternatives given below it. Then decide which GNE answer best fits your feelings and mark the box for that answer on your answer sheet. Please choose only one alternative for each statement and try to respond to every statement. If you mark a wrong letter by mistake, erase the mark carefully before putting in the correct one. Please do not mark the question booklet.

Do not think too long on any one statement. Give the first 'natural' answer as it comes to you. Try to answer every one of the items in the booklet.

# BIOLOGY IN MY LIFE

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ERIC Full Text Provided by ERIC

I should like to belong (or like belonging) to a biology club..

A B C D E

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the time all the never · time 16. I do biology experiments in my spare time about: once a once every once a month three months year week I think the school should have more biology periods each week. , . C strongly not sure . disagree agree agree disagree 18. I find biology difficult to understand. difficult in between easy extremely difficult -My father wants me to become a biologist. 19. B C D E much some not sure not at all very much I should like to become a biologist. much some a little very much LEARNING ACTIVITIES I would much rather do experiments in biology than read about them. . most of sometimes seldom the time I would rather do a biology experiment than listen to a lecture on the 22. same topić. not sure disagree strongly. I want to learn for myself why biology experiments turn out the way they ₿• much a little very much not sure It is fun to guess the outcome of biology experiments. . С not sure disagree strongly \_agree agree disagree .

12

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25.	It is the experi	mėnts in bio	ology that make me	understand it	• •
-	<b>4</b> 44. €	. B	C ·	D	Æ,
•	strongly	ågree (	'not sure	disagree	strongly
•	agree		, <b>, ,</b>	J	disagree
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26,	Working in the t	iningar lebar	ratom is fun.		
201	MOTIVING THE OTHER	a ranor	16	; u .	` 1R .
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27.	• •	e protoch b	roblem is interest	ing. `.	
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·28·	I would rather w	crk out how	to do a biology e	experiment by m	yself than
	he told.	<b>a</b> '	,		•
	• A ·	• ,B` `	C .	D .	. E
	<ul><li>strengly</li></ul>	agree	not sure	disagree .	strongly .
	agree ·	.' .		•	disagree '
	•		•	•	
29.	I enjoy discussi	ng biology	problems raised in	class with my	friends.
` .	A	B B	· " C .	<b>.</b> D '	E
, ,	strongly	agree	not sure	.disagree	strongly
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30.	You can lear ac	re from a b	lology text book	hen by doing e	reminents.
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31.	Riology teachers	ນິວດ ວນຜນໂດ ເ	questions to which	h they know th	e answers.
)±•	brotogy reachers	arrays ask	dacaerona ee hirr	יים איינות ליינו	TO THE
	etrongly 3	agree	not sure	disagree	strongly
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70	Mono biology on	.inmont ic n	eeded in schools.		•
<i>5</i> 2.	More prorogli edr	rrhmeno to n	eeder in schools.	₩ <sub>D</sub> ,	E
•	. # . ~***************	ь . Б	not sure	di comoo	strongly
,	Strongly	saree .	nov sare	disagree	
	agree			1	disagreé
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33.	protoga experime	ents demonst	rated by teachers	are more inter	esting than
	the ones you do	ior Jourser	I.	1 .	F .
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•	strongly	agree	not sure	disagree,	strongly
	agreė .	.,		k * - '	disagree
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SEX SEX

All answers to the items in the pupil orinion poll are to be marked on THIS SHEET, IN FEMALL. Take care that you mark your answers alongside the correct item numbers. If you do mark a wrong letter by mistake, erase the mark carefully before putting in the correct one. Any items with more than one letter marked will be discounted:

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